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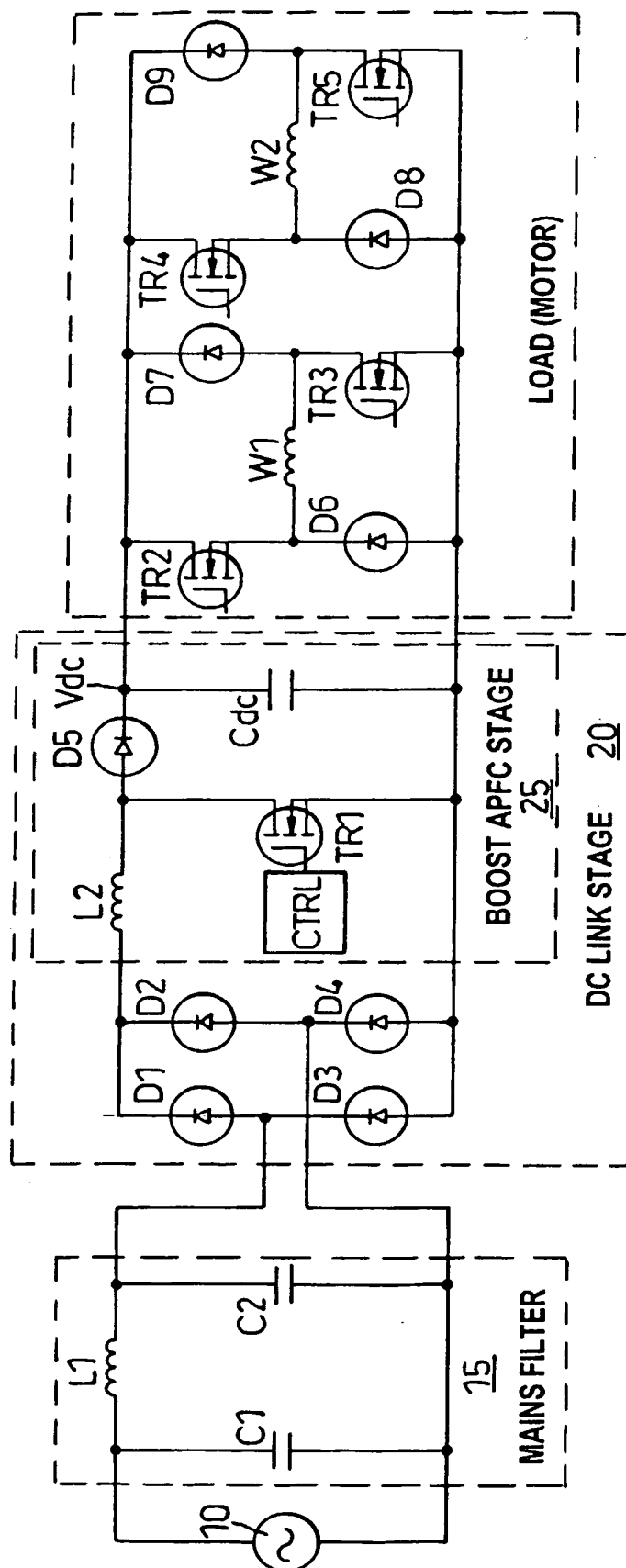


Fig. 1

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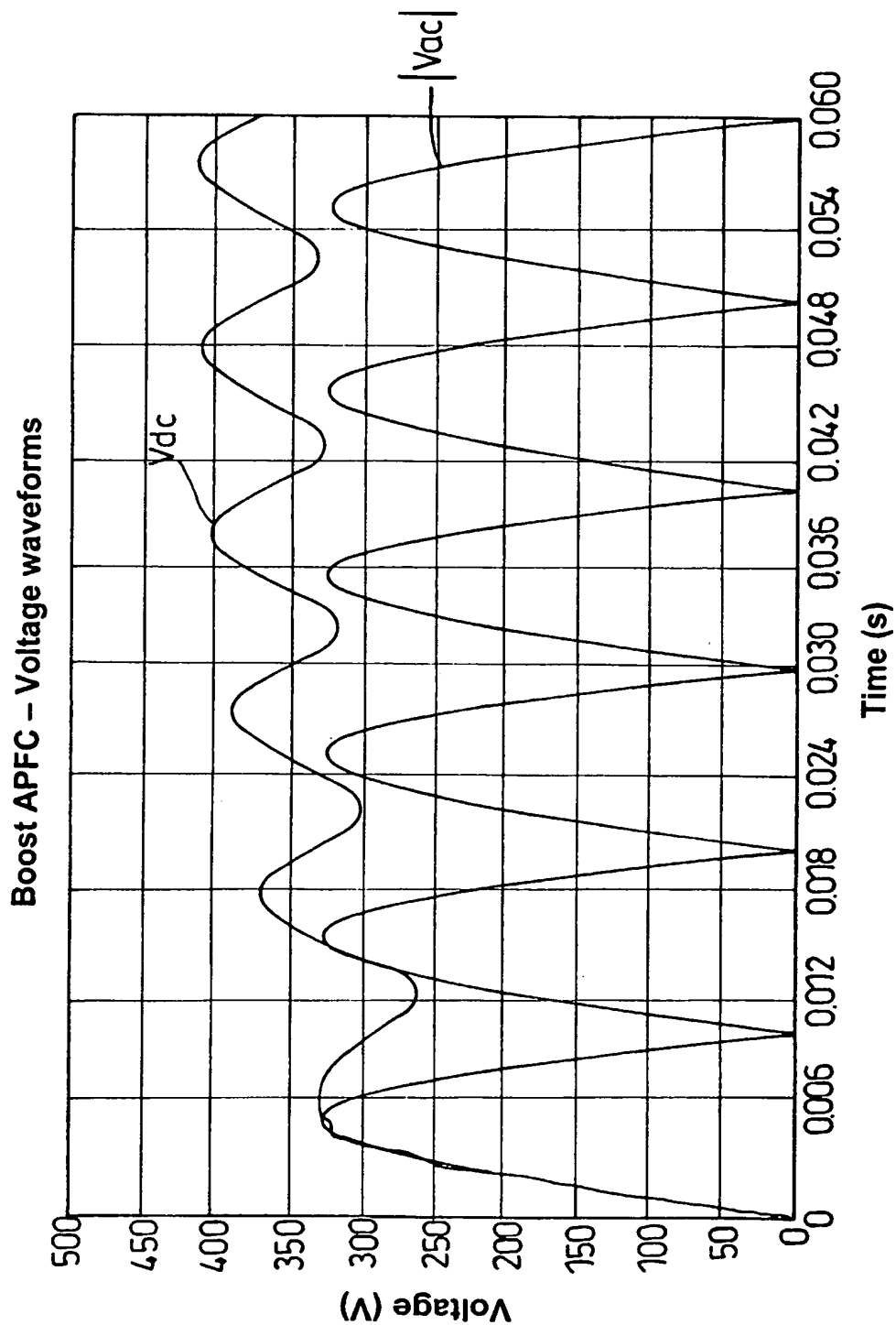


Fig. 2

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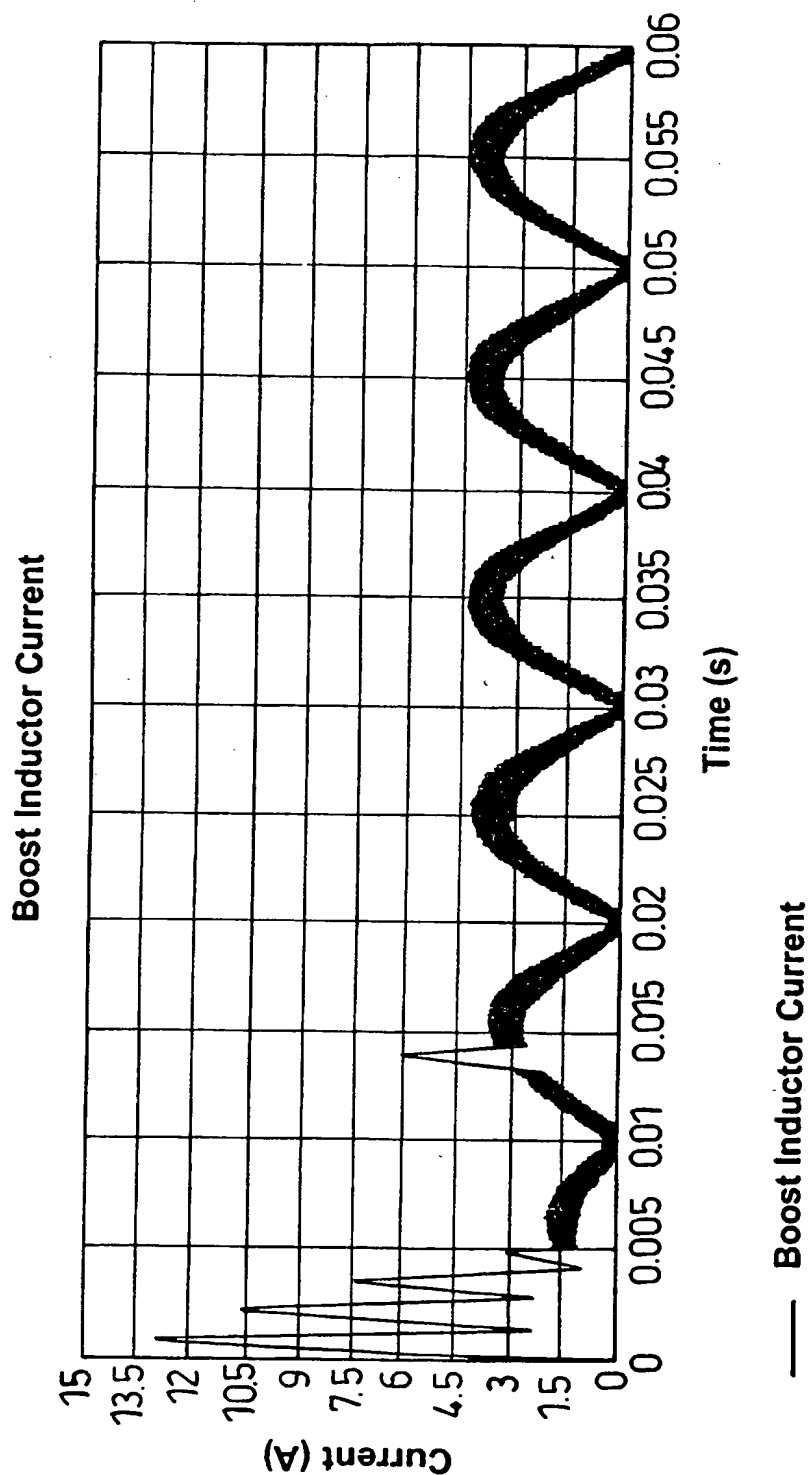


Fig. 3

STATE 1: TR1 (PFC) ON; TR2 + TR3 OFF

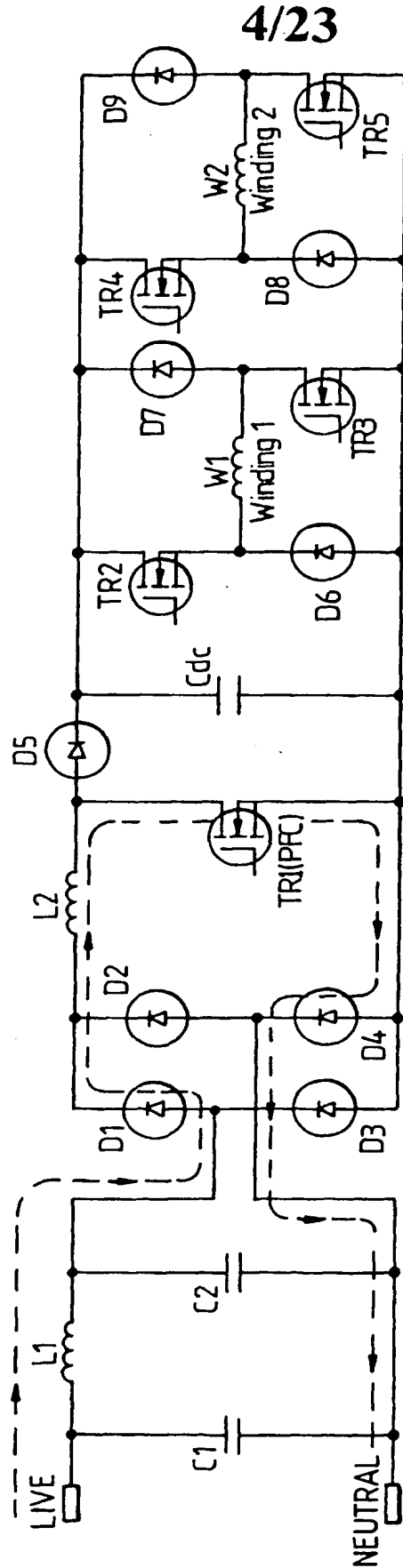


Fig. 4

STATE 2: TR1 (PFC) OFF; TR2 + TR3 ON

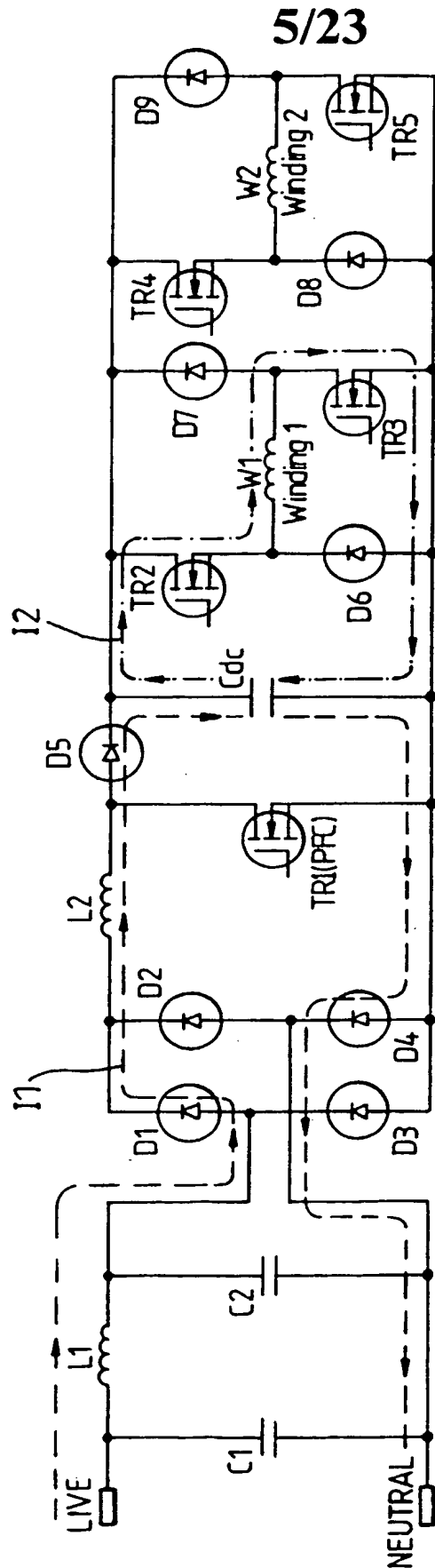
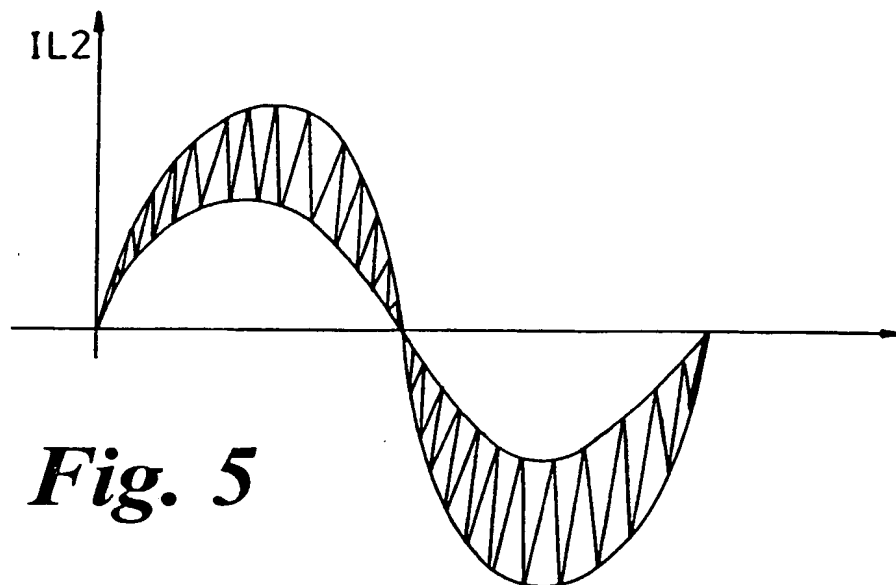
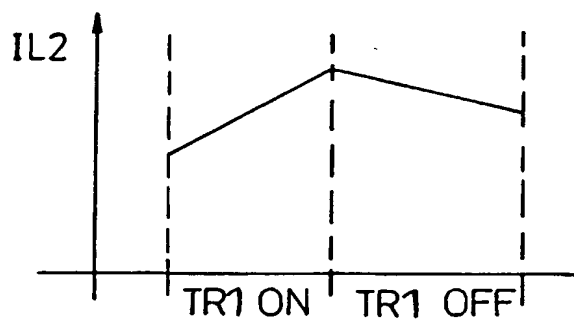


Fig. 6

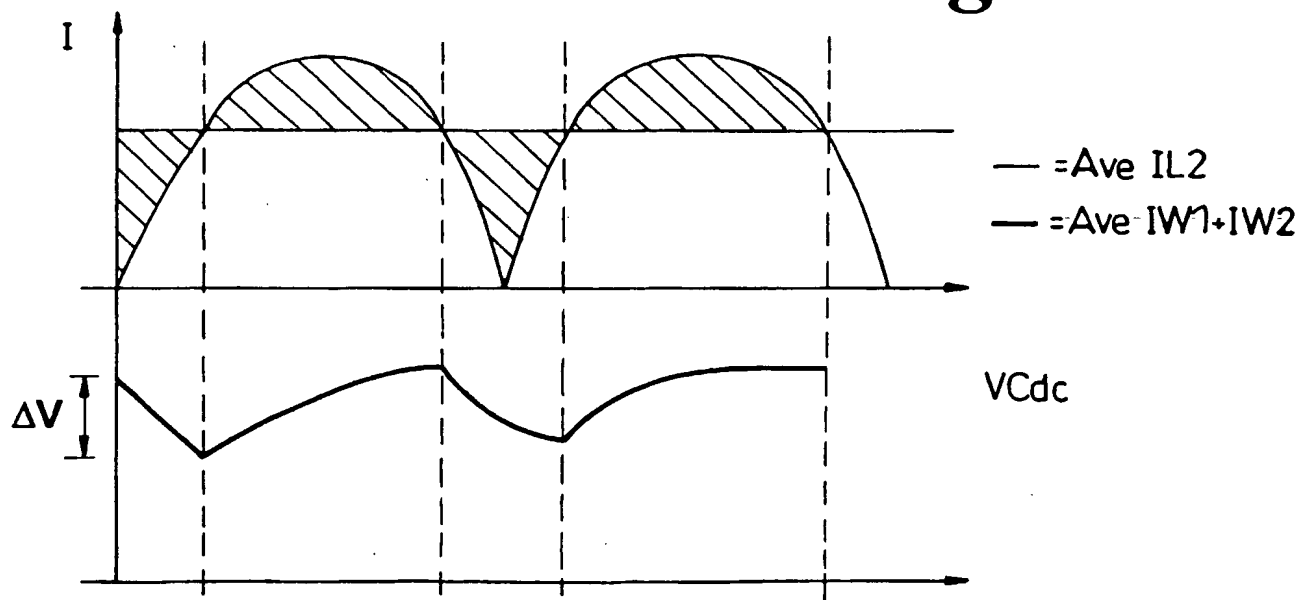
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**Fig. 5**

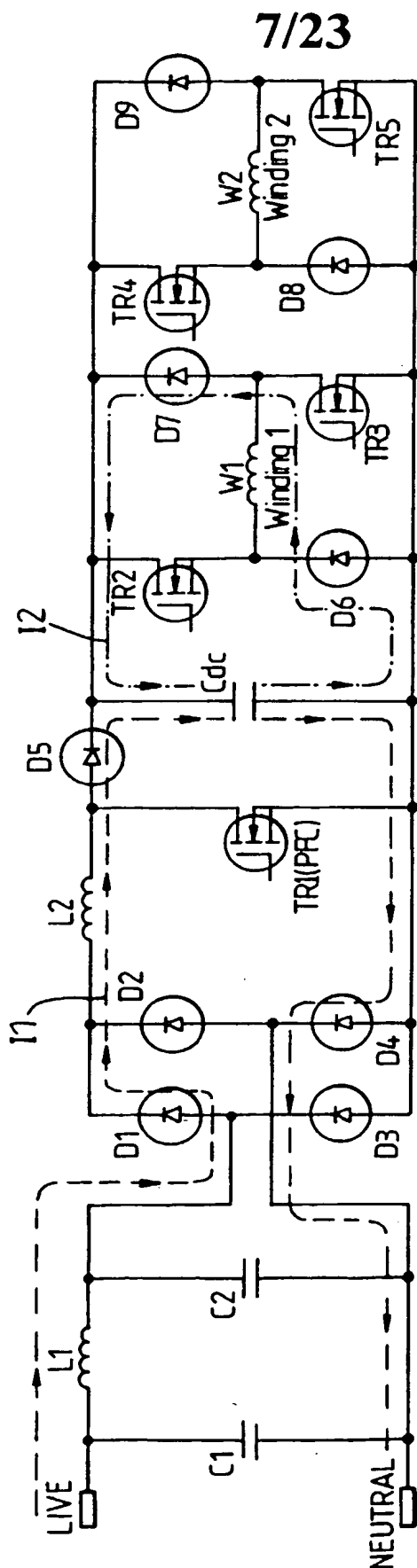


**Fig. 7**



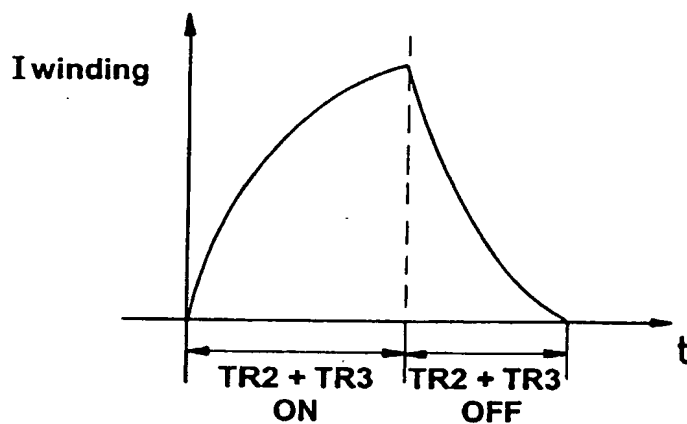
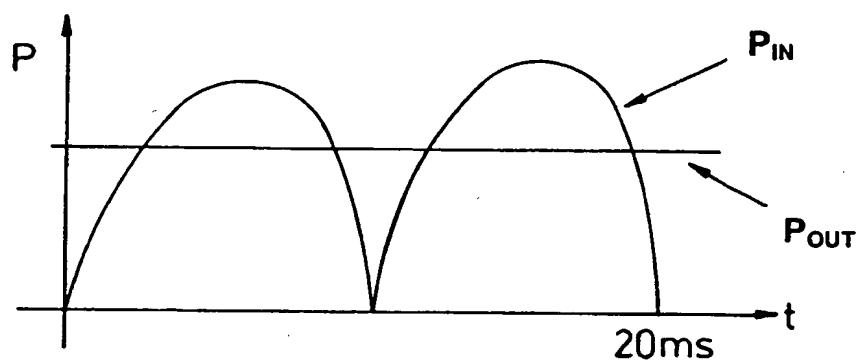
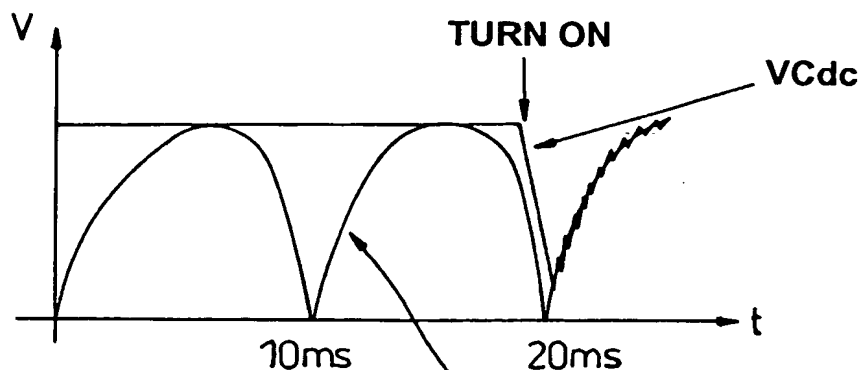
**Fig. 8**

**STATE 3: TR1 (PFC) OFF; TR2 + TR3 OFF**



**Fig. 9**

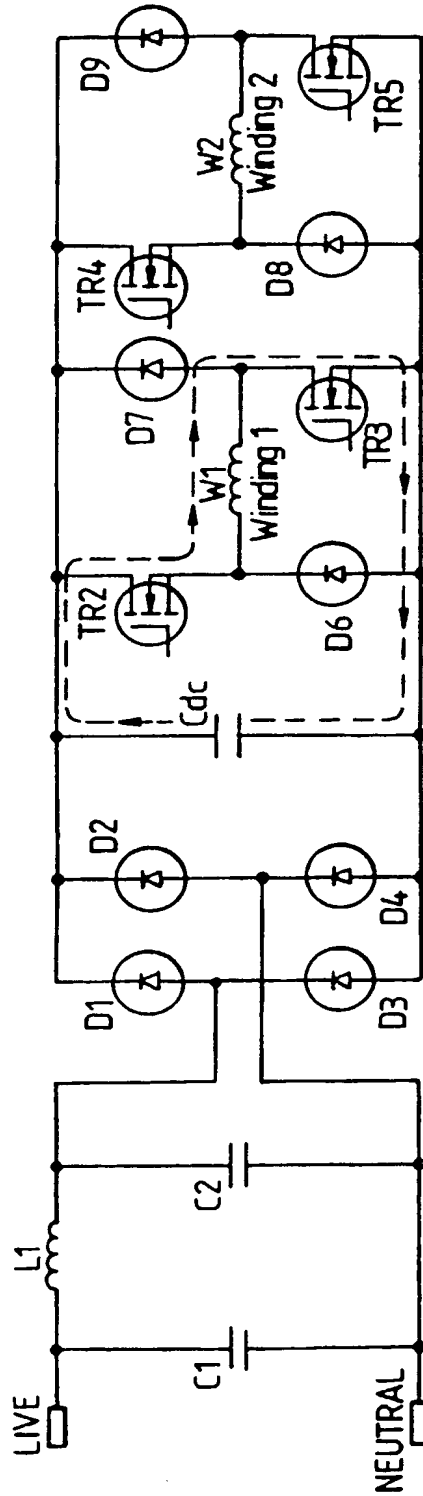
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**Fig. 10****Fig. 11****Fig. 13**Equivalent  
Rectified Voltage



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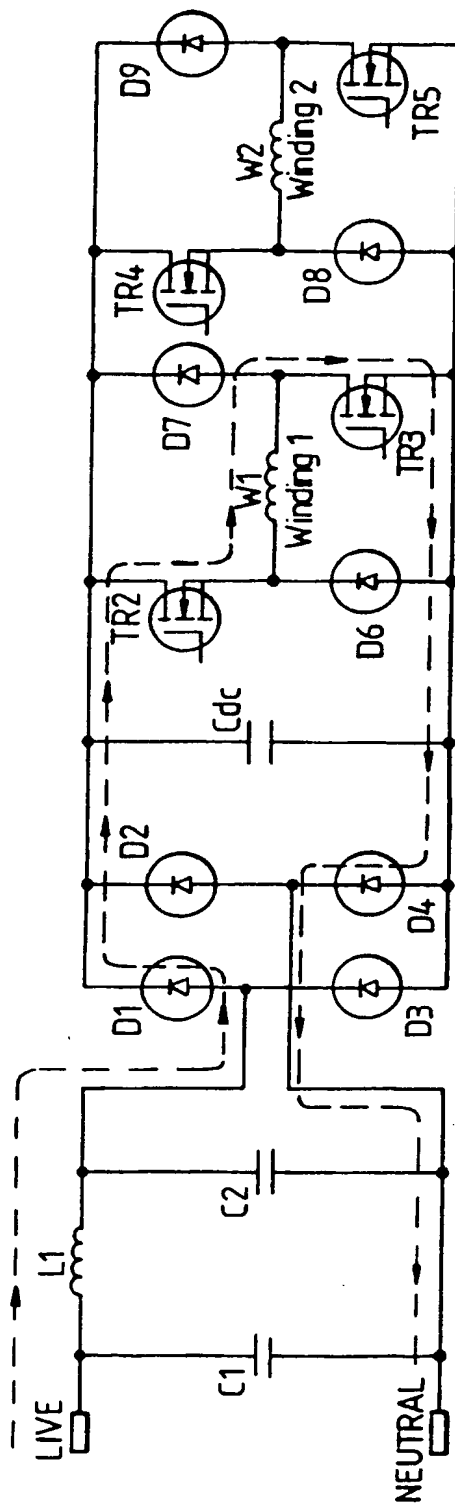
STATE 1: TR2 + TR3 ON



*Fig. 12*

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STATE 2: TR2 + TR3 ON



*Fig. 14*

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STATE 3: TR2 + TR3 OFF

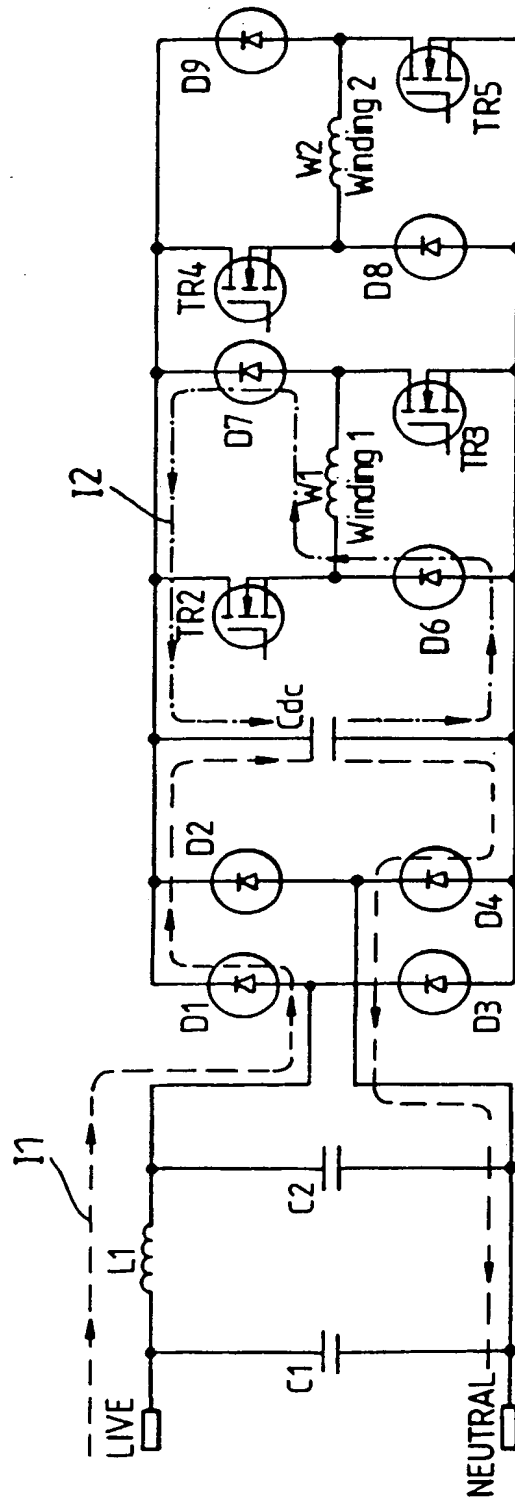
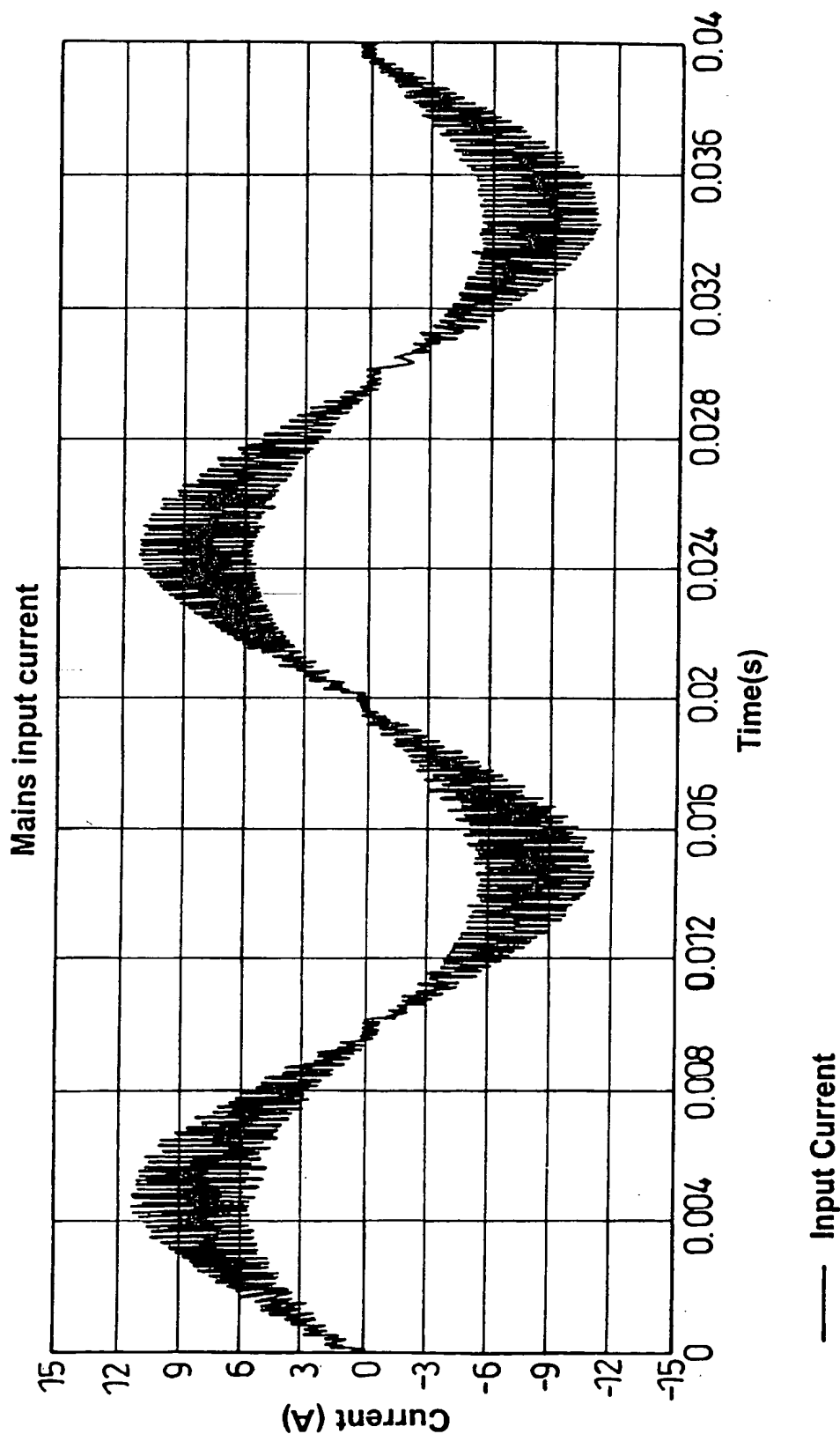


Fig. 15

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*Fig. 16*

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STATE 4: TR2 + TR3 OFF

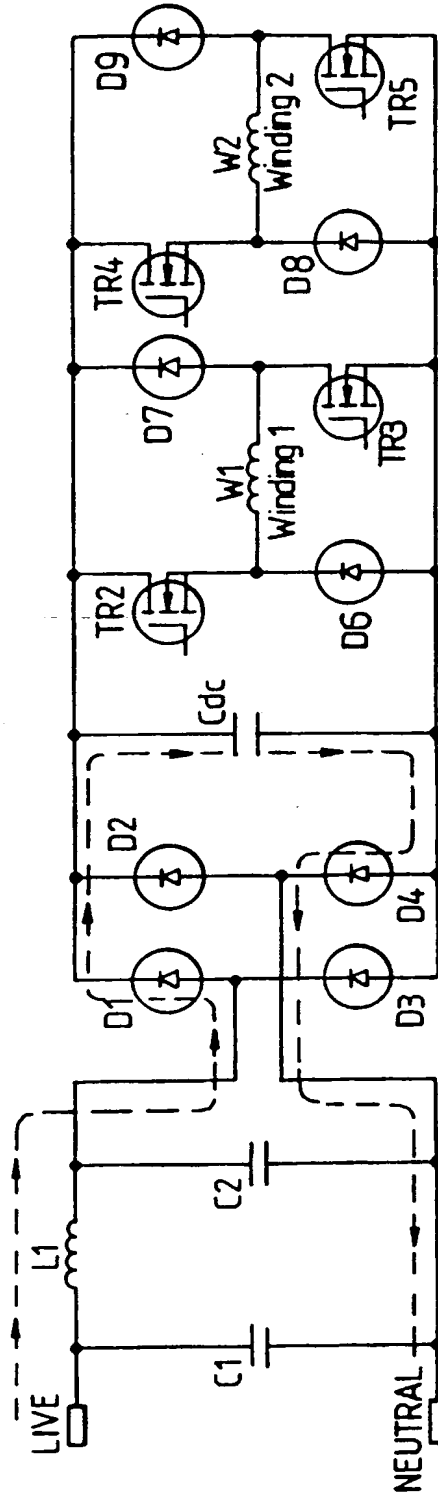
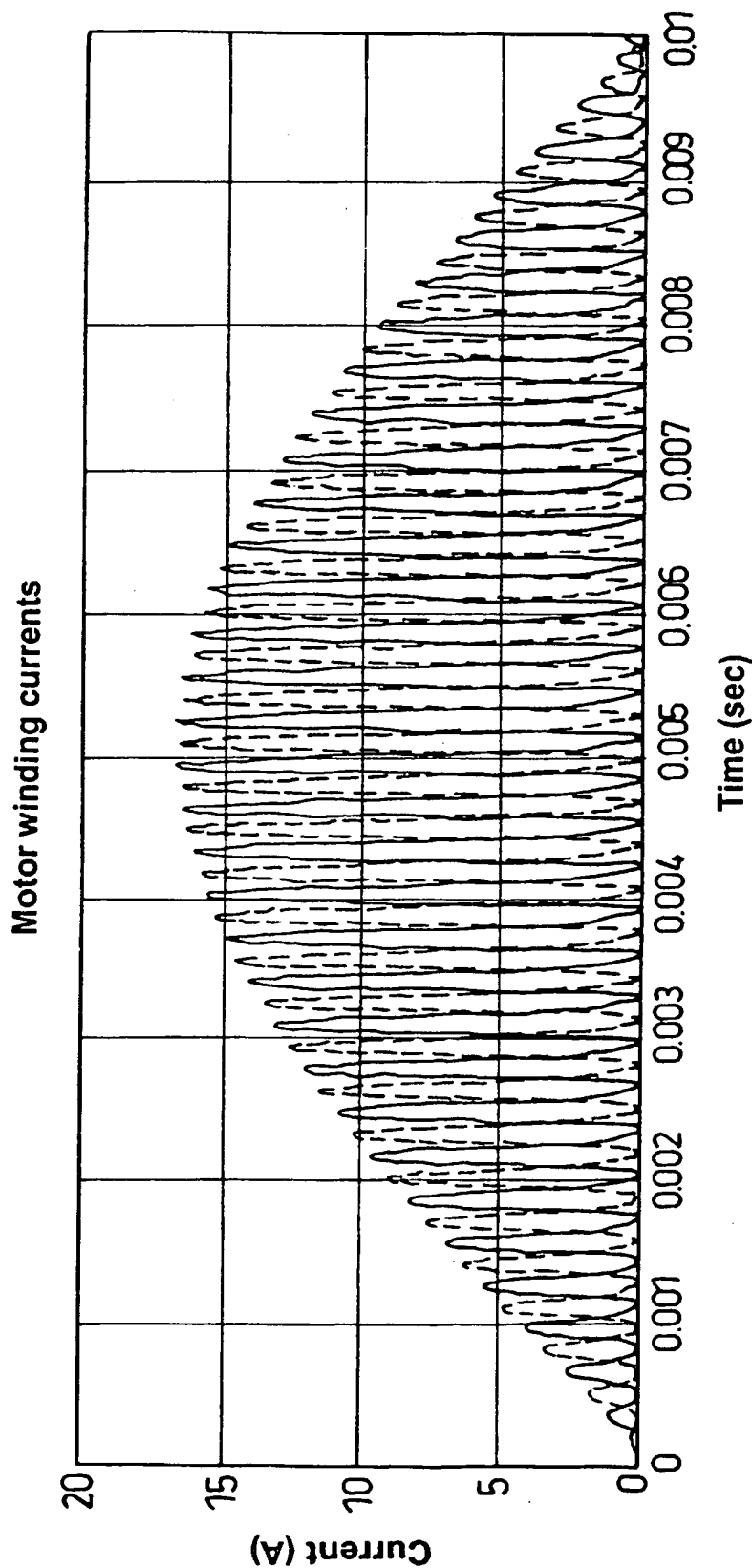


Fig. 17

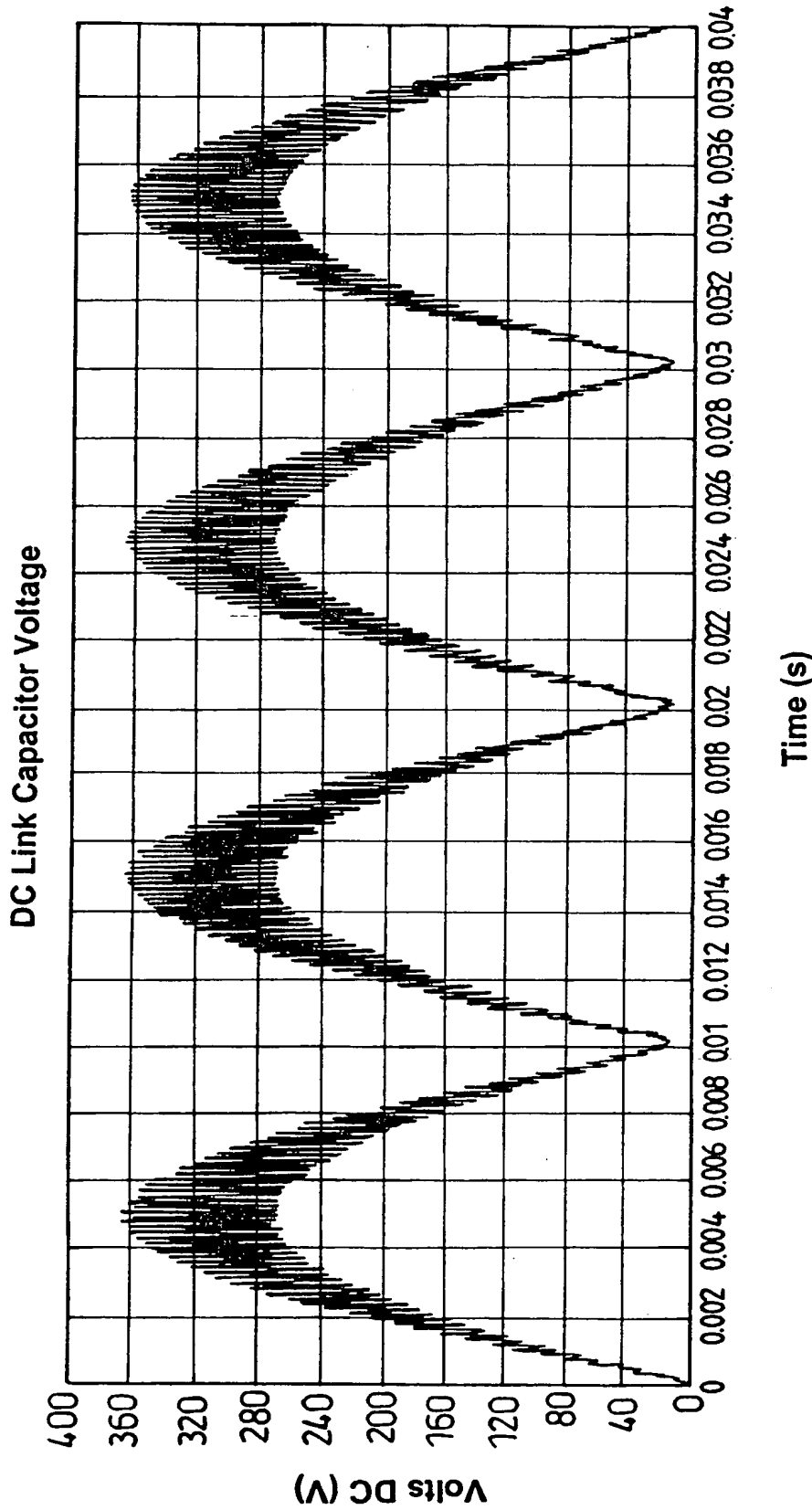
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*Fig. 18*

— Winding 1  
 --- Winding 2

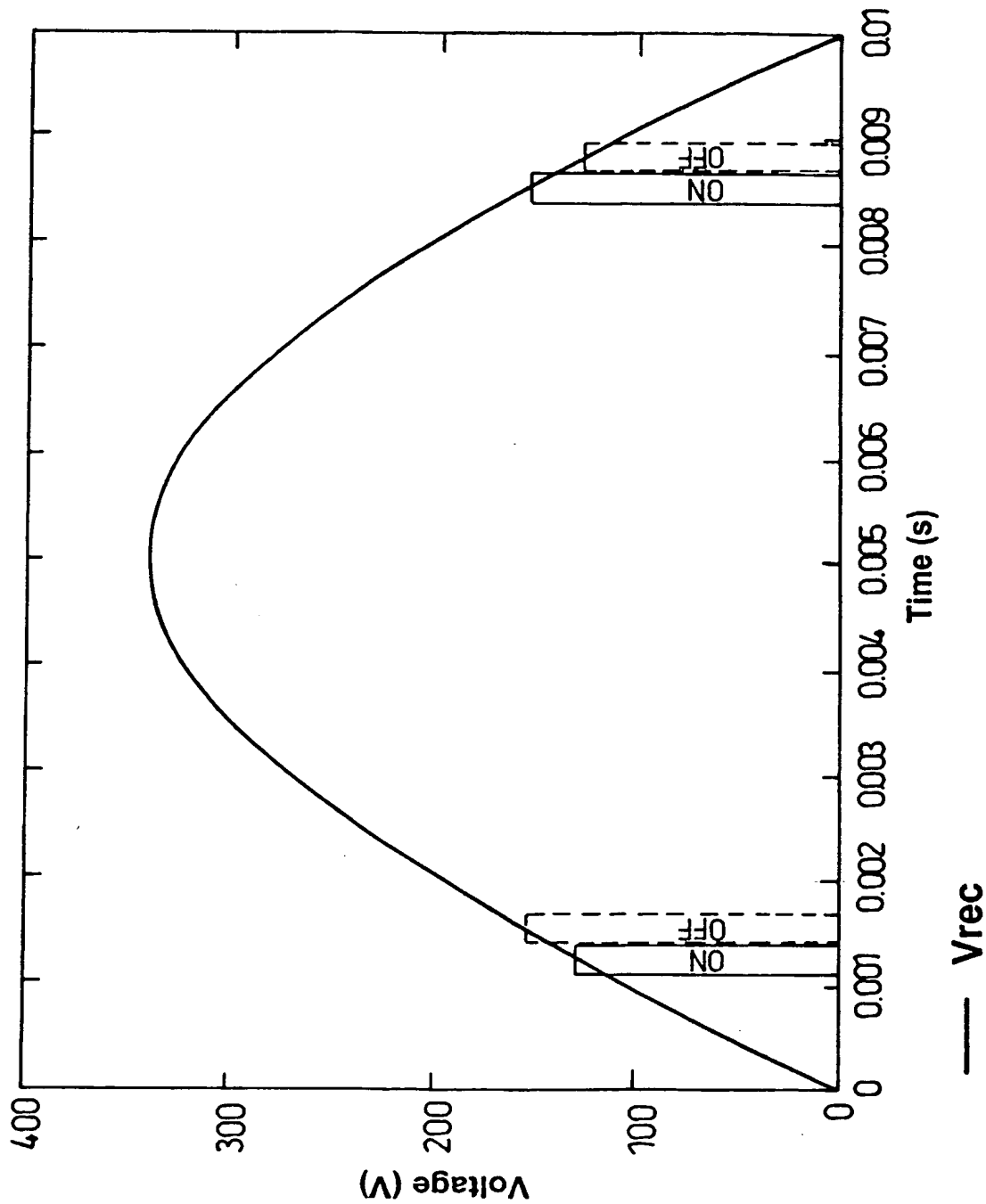
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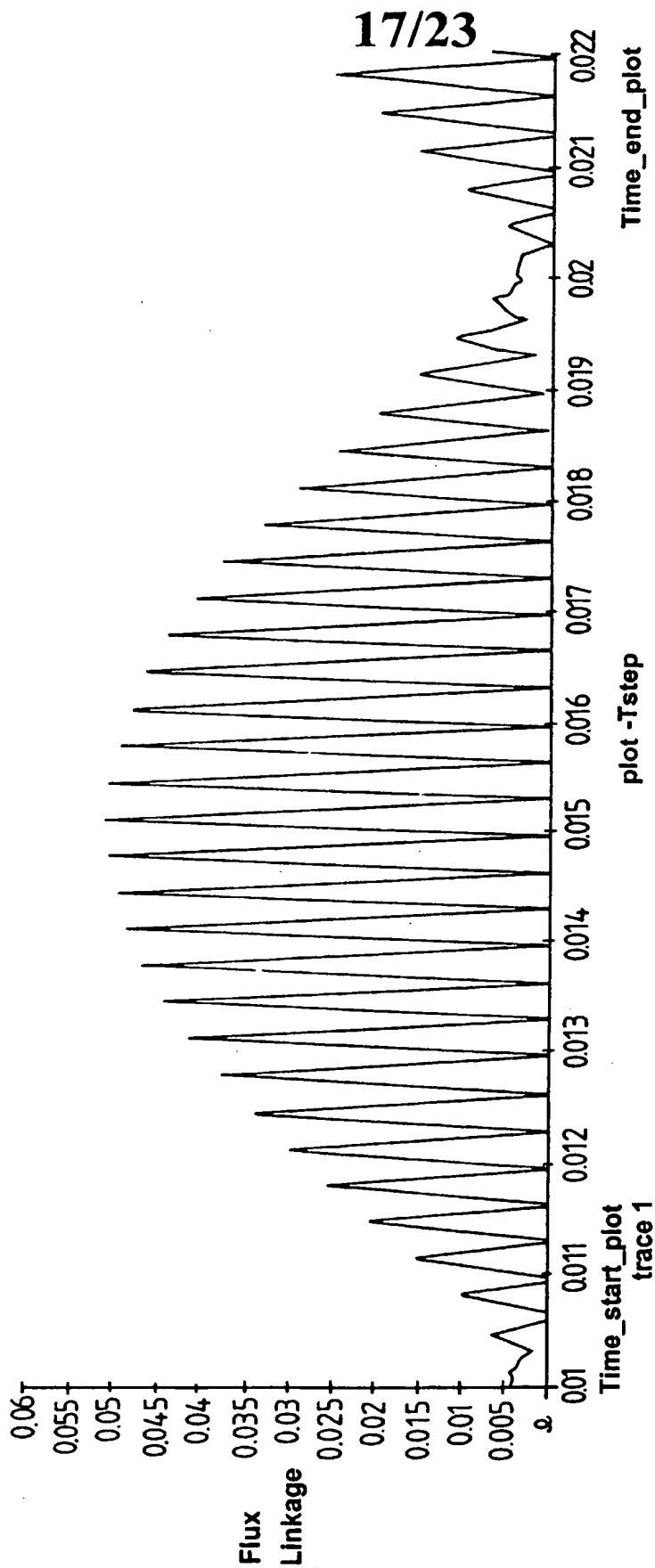
— DC Link Volts

Fig. 19

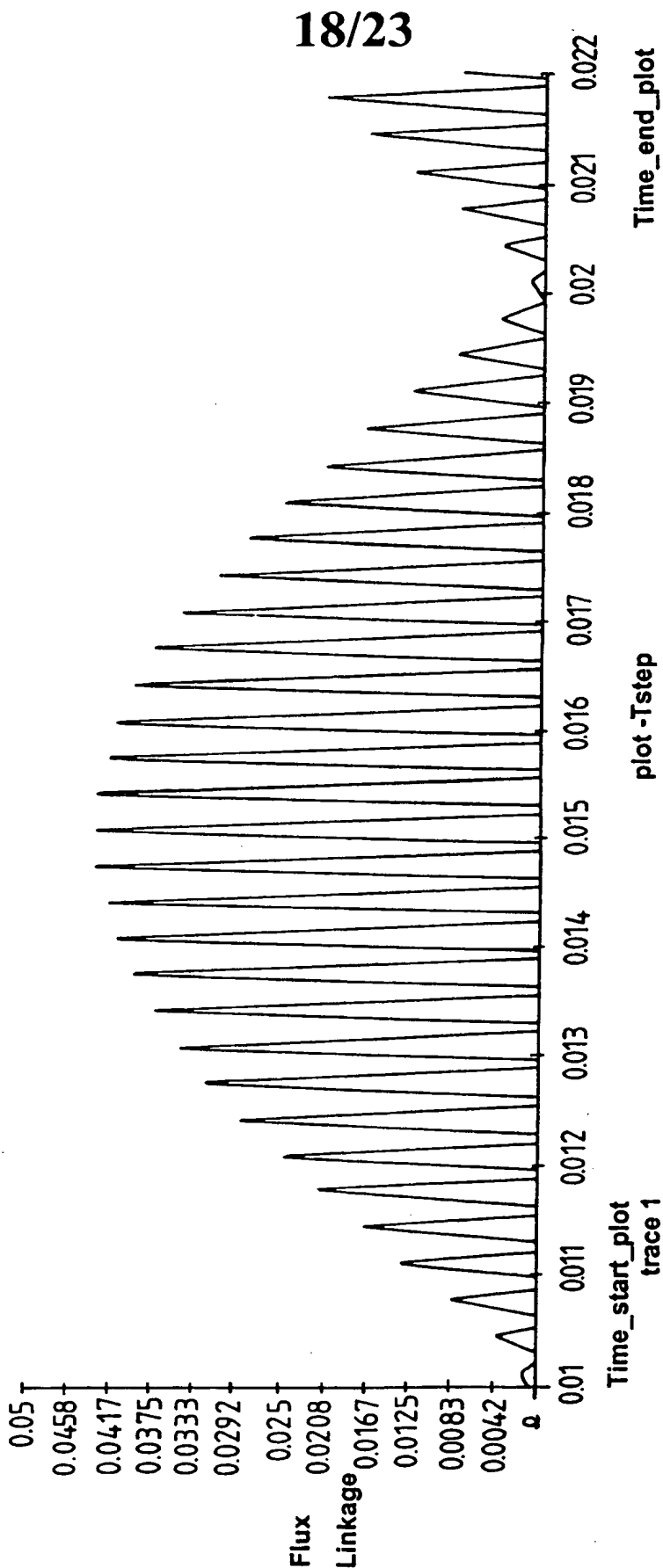
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*Fig. 20*



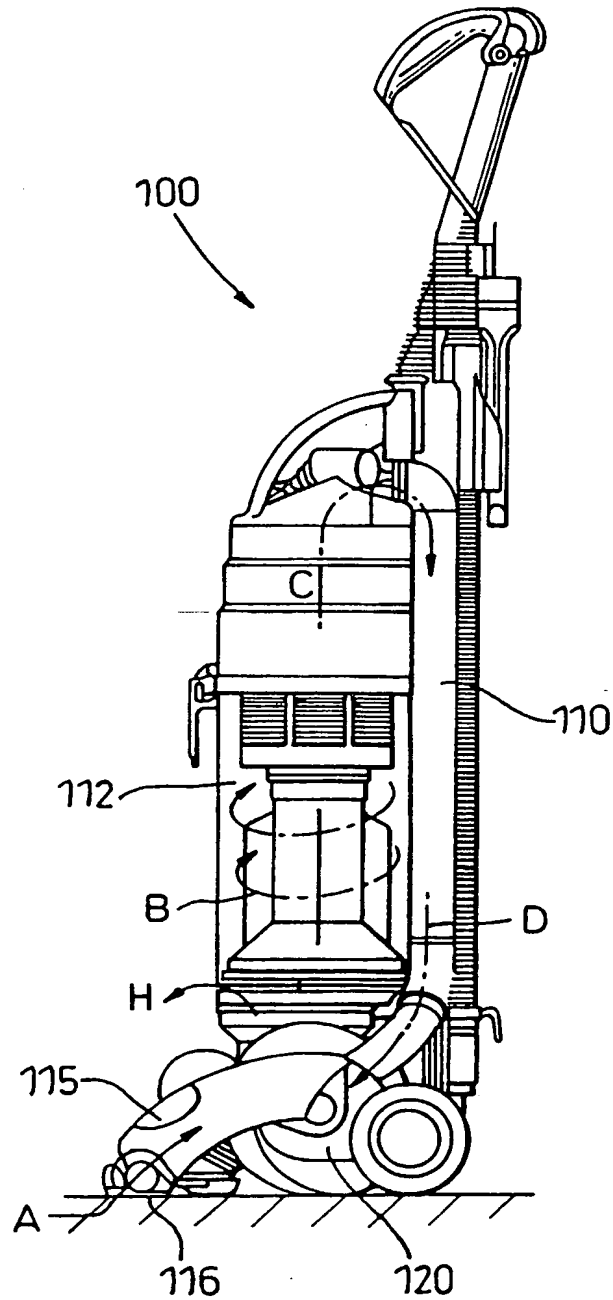


*Fig. 21a*

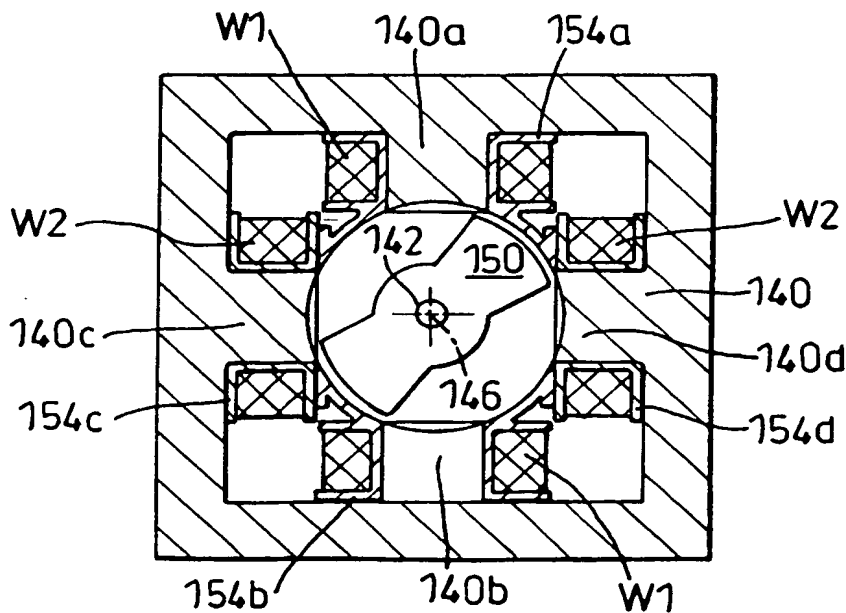
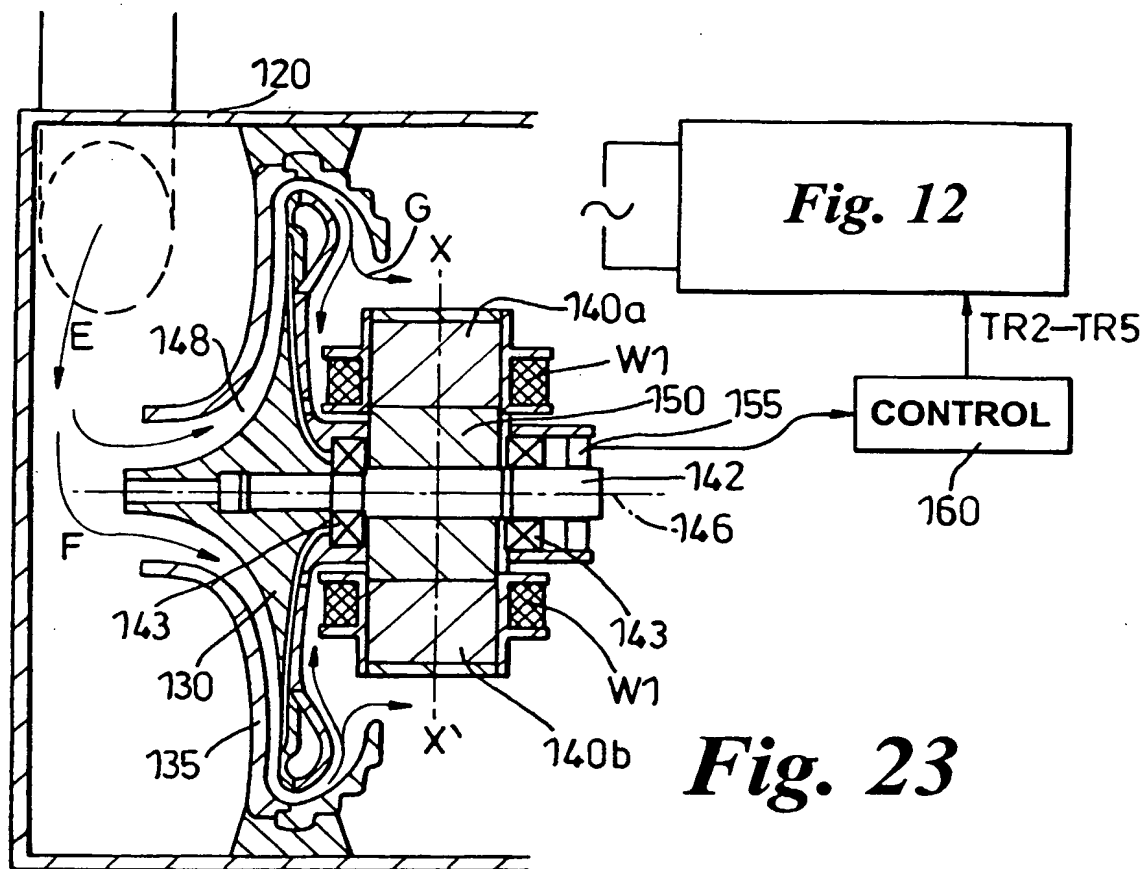


*Fig. 21b*

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**Fig. 22**

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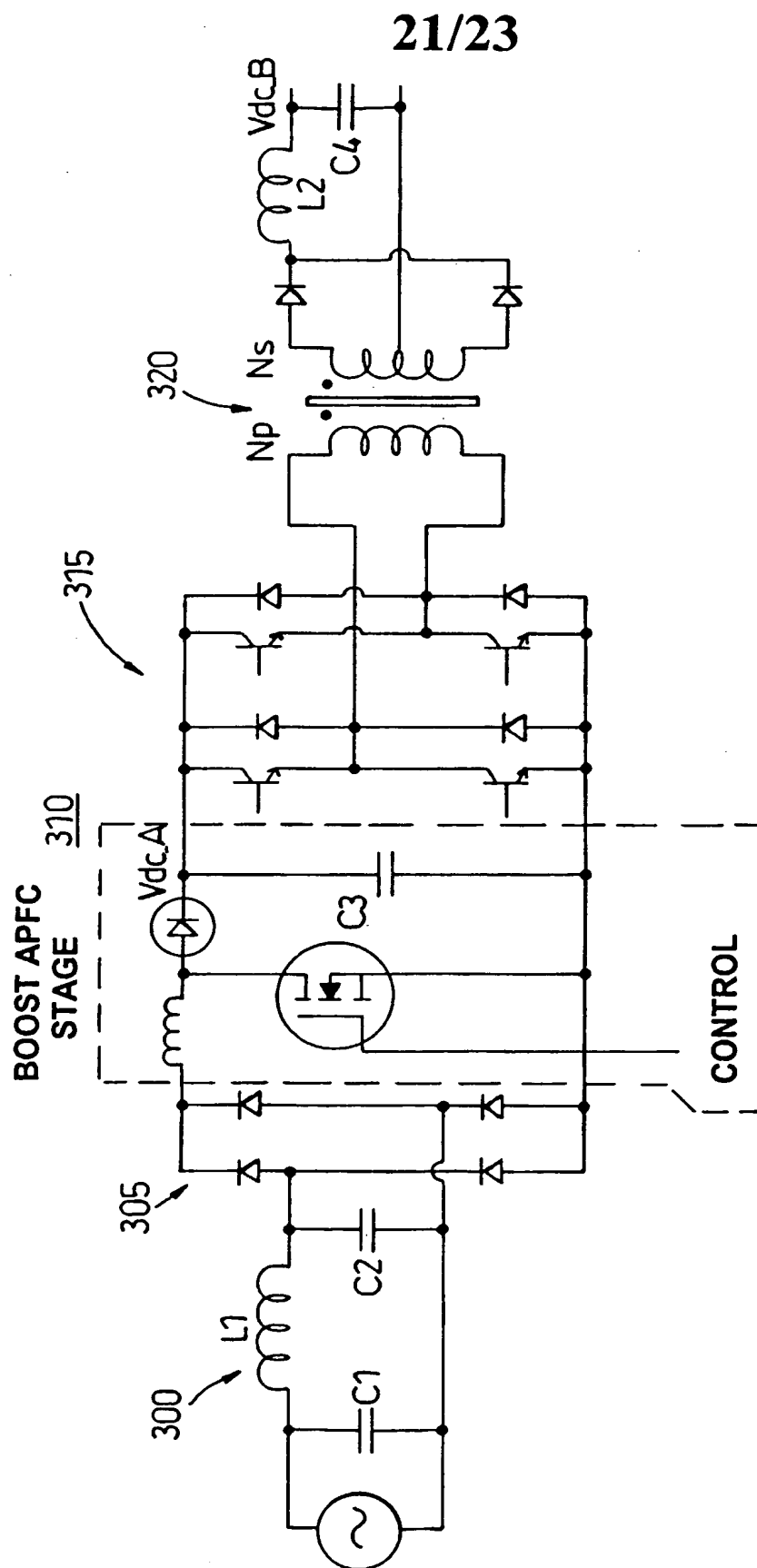


Fig. 25

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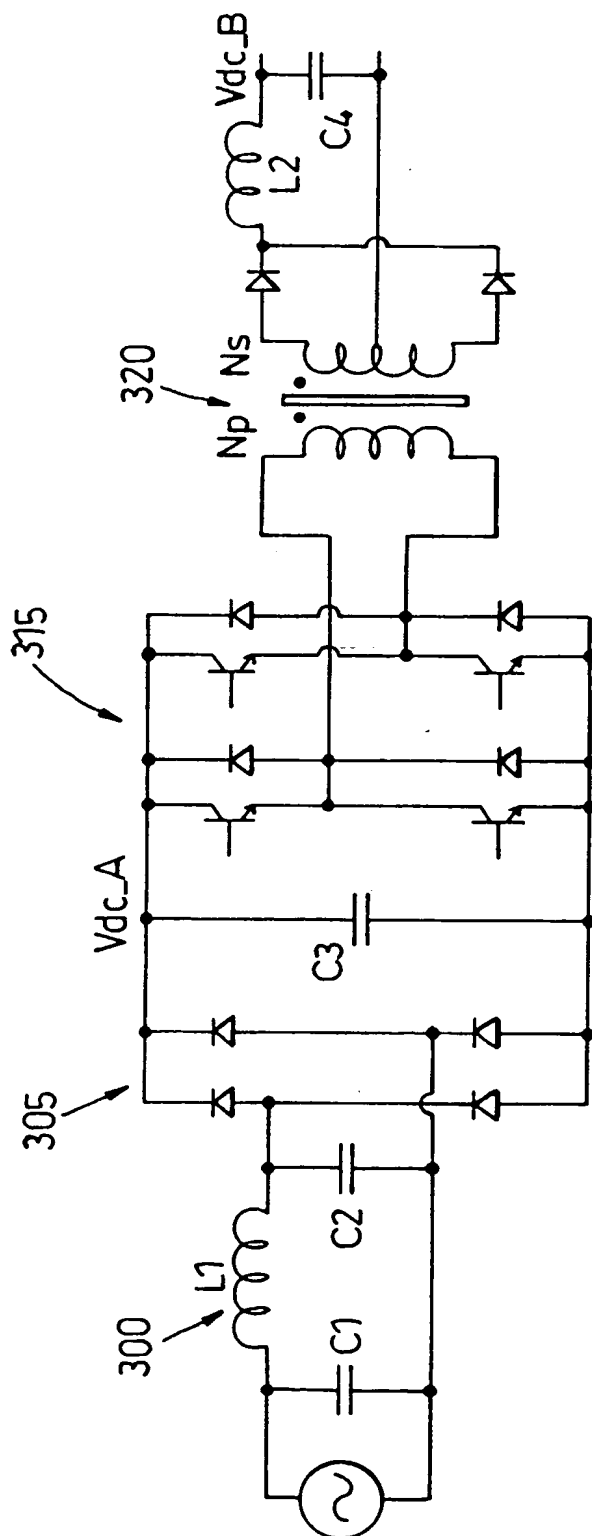
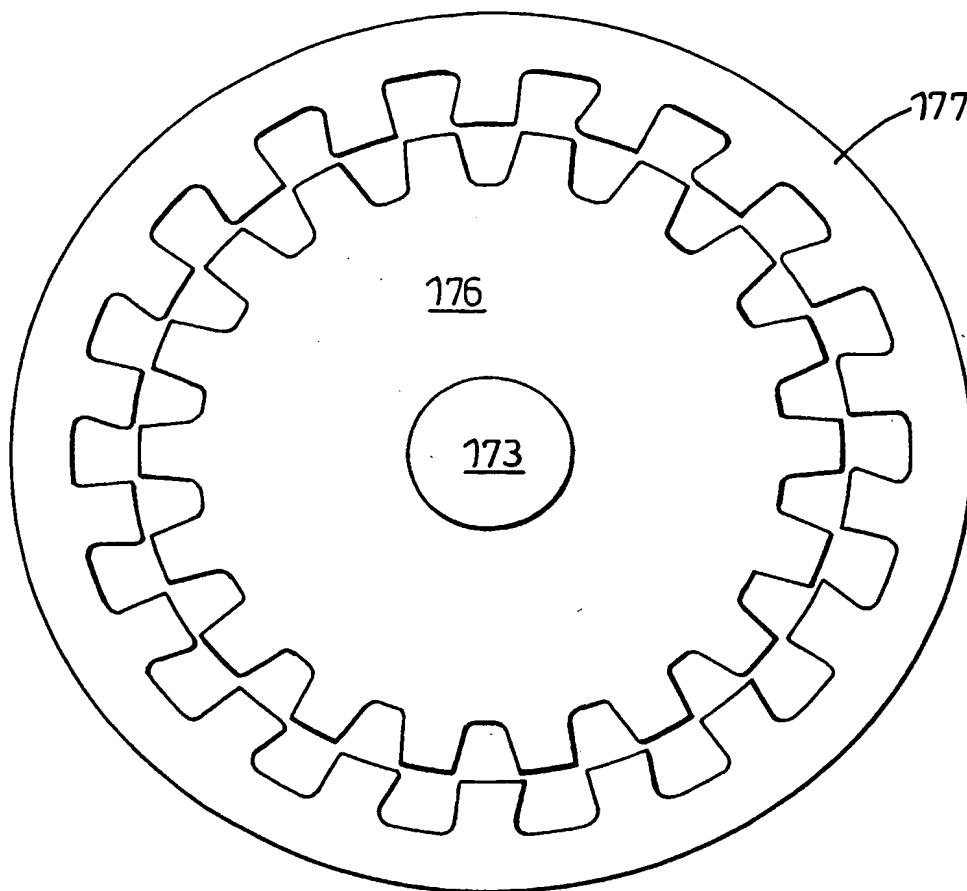
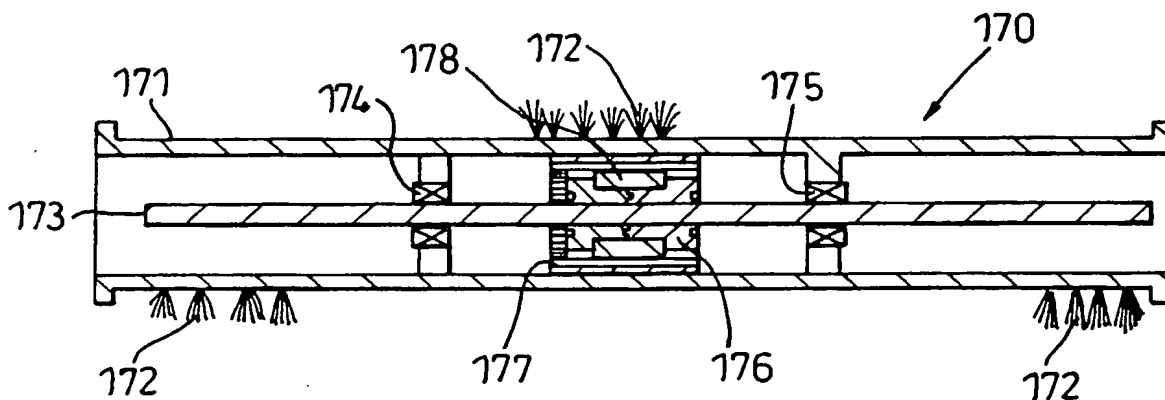


Fig. 26

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**Fig. 27**



**Fig. 28**